Purpose. To evaluate Magnetic Resonance (MR) imaging patterns of differentiation from osteitis to other radiation induced bone changes, metastasis or tumoral extension, after radiotherapy (RT) of STS.
Materials and methods. Twenty one patients were selected from our data base of sarcomas at Cruces University Hospital, from March 2004 to December 2010. All of them, STS of extremities, who went through radical surgical resection and radiotherapy. Image findings in MR were reviewed to differentiate potential post-treatment changes, and differentiate them, from recurrent tumor, with clinical correlation. 51.38% of selected patients were female, and 47.62% male. 3 cases of radiation osteitis were identified (prevalence of 14.2%). The mean age was 65.6. 2 patients (66.6%) had a myxoid liposarcoma and 1 patient (33.3%) a high-grade fibrosarcoma. Median dose was 55 Gy (range, 45–60 Gy). Brachytherapy was used in 1 patient (33.3%). MR shows changes in the marrow signal within the region of tumor bed, these abnormalities have low intensity in T1 sequences and high signal in T2 and STIR. After administration of gadolinium, in T1 weighted and SPIR sequences, slight heterogenous enhanced areas appear, due to fibrotic changes. These signal changes are focal, show geographic distribution, a faint enhancement mainly in peripheral areas, are not accompanied by soft tissue mass, does not exist in the first MR controls, and they increase in size and number at subsequent follow-up.
Conclusions. MR can illustrate abnormal bone change distribution and is useful for diagnosing osteitis by characteristic intensity patterns. Adding STIR sequence would be considered if radiation osteitis is suspected, in order to improve diagnosis from recurrent disease, follow-up and treatment if required, in these patients.

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Radiotherapy as treatment of sialorrhea in bulbar and pseudobulbar palsy

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Background and purpose. Bulbar and pseudobulbar palsy is defined by impairment of cranial nerves due to lower and upper motor neuron lesions. Amyotrophic lateral sclerosis and Parkinson's disease are examples of this kind of neurological pathology. Sialorrhea is a frequent symptom, because of progressive weakness of oral, lingual and pharyngeal muscles. As salivary glands radiation provokes xerostomia, this study aims to investigate the response to palliative radiotherapy parotid, to reduce salivary secretion in these patients.
Materials and methods. We report data from fifteen patients treated between March 2010 and January 2012 (nine women and six men), mean aged 56.6 years (range from 29 to 84). Thirteen were diagnosed with amyotrophic lateral sclerosis and two with Parkinson's disease with major drooling problems. Therapy with anticholinergics and intraparotid botulinum toxin had failed in most of them. All the patients were treated with palliative external radiation therapy to reduce salivary secretion. Conformal radiotherapy technique with two oblique anterior and posterior wedged fields was chosen. In ten patients, 8 Gy dose was prescribed to the isocentre using 6 MV photons in a single fraction. Five patients received two 8 Gy dose fractions in each of the parotid glands, for a period of two months after the first fraction. As majority of patients had decubitus intolerance, adequate immobilization systems were possible only in some of them. We analyze the treatment toxicity.
Results. After radiotherapy, nine patients had a significant reduction of salivary secretion. Four patients did not achieve a relevant reduction of sialorrhea or any subjective improvement. The last two patients were lost or died in this period as a result of the underlying disease. All of them had cutaneous transient toxicity as the only side effect.
Conclusions. In the present study we show a significative improvement of sialorrhea in patients with bulbar and pseudobulbar palsy, after single or twice fraction of external palliative radiation therapy when other treatments have failed. No major side effects appeared, apart from radiation-induced dermatitis.

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Radiotherapy in Dupuytren's contracture: A single institution's experience

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Introduction. Radiotherapy can prevent progression of early-stage Dupuytren's contracture. To report our experience and make a review of the literature.
Methods. Between 2011 and 2012, 5 patients have been treated in our Hospital with electrons (5 MeV). We use individual lead and we treat the diseased areas only. According to Tubiana's classification, 3 patients had stage N/I, 1 had stage I and 1 had stage II. We have evaluated subjective response, objective response (palpable nodules and cords, functional changes) and acute and chronic toxicity.
Results. All patients received 5×3 Gy (total dose 21 Gy). The mean age was 57 years. 80% were men. 4 patients had been treated before radiotherapy, with local excision (75%). With a follow-up of 11 months, 60% patients observed subjective response and 20% patients observed stable situation. Objective reduction of nodules and cords occurred in 3 patients, 1 of them had also functional

improvement. 1 patient progressed and have required salvage treatment. None of them have presented nor acute toxicity neither chronic toxicity.
Conclusion. Radiotherapy prevents disease progression for early-stage Dupuytren's contracture. This way we can avoid new surgical procedures.

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Radiotherapy in Ledderhose's disease

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Introduction. Ledderhose's disease or plantar fibromatosis is a proliferative disorder affecting connective tissue of the plantar fascia, it is very similar to Dupuytren's disease that affects the hands. It is characterized by the appearance of painful subcutaneous fibrous nodules that may difficult the walk. Treatments include corticoids and surgery with disappointing results. The rate of recurrence after surgery is high 30–50%. There are not many references in the literature[1,2] about irradiation treatment of this disease. It is not established dose or regimes of treatment at the present. Objectives: To report our experience with five patients treated with irradiation.
Methods. Between September 2011 and September 2012 five patients with Ledderhose's disease were referred to our department. They were treated with direct electron field with a total dose of 30 Gy, 3 Gy fraction.
Results. The mean age was 44.5 years (30–53 years), three women and two men. There has been no progression after treatment. Responses were obtained in the two males, one complete remission and 90% response respectively, with complete disappearance of pain (40%). In the remaining three patients stable disease without clinical improvement (60%) were observed. There has been no acute or late toxicity.
Conclusions. Although the follow up and number of patients are small, the observed results are similar to published series in the literature (24 and 25 patients respectively). Radiotherapy is an effective treatment, and complete remission can be obtained for both pain and the tumor.

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Radiotherapy in primary unresectable unicentric Castleman disease: Case report

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Introduction. Castleman disease (CD) is a rare benign disorder characterised by hyperplasia of lymphoid tissue that may develop at a single site (unicentric) or throughout the body (multicentric). It involves hyperproliferation of certain B cells that often produce cytokine IL-6. Surgery remains the main treatment for resectable unicentric CD, since removal of the large node is possible without further complications. No consensus has been reached concerning the most adequate treatment for irresectable unicentric CD.
Objective. Case report description of a unresectable unicentric CD with a successful response after radiotherapy.
Methods. The patient was a 24-year-old man with a nephrotic syndrome becasue of mesangial proliferative glomerulonephritis. FDG-PET/CT found a right hiliar mass of 3.5 cm of diameter. Open thoracotomy showed infiltration of the right pulmonary artery and superior pulmonary vein requiring a neumonectomy. Histopathological analysis of the tumor showed hyaline vascular type of CD. The patient was transferred to our department. Radiotherapy treatment was performed with 3DRT (6Mv) giving 46 Gy (200 cGy/fraction).
Results. CT showed a progressive reduction of the mass at 3 and 6 months, with complete remission at 12 months. Patient was asymptomatic without late effects and without nephrotic syndrome.
Conclusion. Radiotherapy should be considered in case of an unresectable unicentric CD.

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